

Greenbelt MD (NGSLR), USA

Jan McGarry/NASA GSFC



Figure. NGSLR ranging to LRO orbiting the Moon.

NGSLR developers continued work on the system automation during the 2009-2010 time period while stabilizing the system performance and working toward a co-location with MOBILAS-7. The system continued to use the eyesafe Q-Peak laser with the 4-quadrant 12% QE detector until near the end of 2010, when the new 1 mJ in-house built laser and a single anode 40% QE Hamamatsu MCP-PMT detector were installed. The combination of the higher power laser and the higher QE detector are expected to permit daylight ranging to GNSS satellites. With the eyesafe laser and lower QE detector, the system had successfully tracked daylight LEO and LAGEOS satellites and nighttime GNSS.

NGSLR successfully performed 1-way ranging to LRO on its first attempt shortly after launch in June 2009 and has been successfully ranging to LRO ever since. Operational ranging to LRO coexists well with SLR R&D development since LRO-LR requires no receiver and each activity has its own separate laser. The lasers are easily swapped by insertion/removal of a mirror and a change of the start diode cable.



Figure. NGSLR staff (left to right): Howard Donovan, Tom Zadwodski, Scott Wetzel, Felipe Hall, Evan Hoffman, Tony Mann, Alice Nelson, Don Patterson, Jan McGarry, Tom Varghese, Bart Clarke, Julie Horvath, Randy Ricklefs, Jack Cheek, John Annen, John Degnan, Tony Mallama. Additional staff members: Peter Dunn, Mike Perry, Mark Torrence.

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